

a little more than a right angle; the pronotum is black with its hind edge narrowly pale; the mesonotum has the six discal fulvous spots smaller than in *rimosa*; and the tergal segments are very slenderly edged with fulvous on either side, more broadly so on the second segment.

Mr. Davis has kindly sent me for inspection a female type taken on Santa Rosa Island off the coast of Santa Barbara Co., Calif.

23a. *Okanagana occidentalis* Walk.

Walker, in Lord, Nat in Vanc. Isd. and Br. Columbia, ii. p. 339, 1866, *Cicada*.

Walker's description of this species applies almost equally well to *rimosa* but he distinctly mentions the fact that the first transverse vein is parted from the second by more than twice its length. The present species is the only one known to me of which this is true. It differs however from Walker's description in having the elytral nervures black to their base and in wanting the pale markings on the disk of the pronotum. This species differs from all its allies in having the first ulnar nervure forked very near its base; the wing appendix is also broader with its anal areole broader and more rounded at apex.

Of this form I have seen but a single female specimen which was kindly sent me for study by Mr. W. T. Davis. This individual was taken at Dilley, Oregon, in July.

A NEW MEMBRACID FROM NEW YORK (HOMOP.)

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Just north of the limits of New York City a species of *Cyrtolobus* flourishes which seems to be as yet undescribed. It falls in the subgenus *Atymna*, Stål. Although occurring in great abundance on its food plant, *Quercus bicolor*, in the locality where it has been found, the trees show no apparent injury from its presence. Both sexes

have been taken, the females outnumbering the males more than two to one. The species is characterized as follows:

Cyrtologus helena, new species. Plate IV, Figs. 1 to 5.

Slender. Pronotum low, coarsely and unevenly punctate, densely on metopidium, progressively more sparsely from humeri to apex; highest at point over posterior end of humeral sinus, thence arcuate to apex.

Face very uneven, sparsely and finely punctured, margins of the cheeks sinuate. Clypeus gradually produced and incurved at apex. Tibiæ with fine spines.

Male type.—Characterized generally as above, the dorsal crest gently arcuate from before humeral angles to medial transverse vitta, thence rather abruptly decurved and almost rectilinear to apex, which reaches a point above anterior angle of costal cell of elytra next forward of terminal areole. Face and base of metopidium yellowish green, eyes clouded. Pronotum with anterior vittæ light warm brown narrowing unevenly from just above medial lateral margins to carina, where they meet in an acute angle anterior to point above humeri. Medial and apical vittæ reaching lateral margins, black for dorsal third, dark brown below, the former vitta throwing a process forward toward anterior vitta two-thirds below dorsal carina. Between these vittæ, and forward of the anterior V, the ground color of the pronotum is creamy white, including the upper part of the metopidium. Elytra clear hyaline, at extreme base narrowly thickened, punctured, and clouded with dark brown; apical cloud sharply defined, blackish brown, almost covering terminal areole and abruptly narrowing to meet pronotal apex. Nervures brown on apical half, creamy toward base. Beneath and legs creamy white; claws pinkish, tipped with black. Abdomen black, last joints medially and claspers pale. Length 6 mm.

Female allotype.—In form and structure like the male, but slightly larger, and the dorsal crest is distinctly higher and more regularly arcuate to the tip, which reaches middle of terminal areole. Face and pronotum pale green, the latter irregularly peppered with whitish. Carina broadly creamy white with central interrupted narrow black line from basal third almost to apex, the black irregularly staining the white beneath it. Broad pinkish spots at anterior margin of metopidium. Beneath pale green, base of abdomen, ovipositor, and claws pinkish, the latter black at apices. Elytra wholly hyaline. Length 7 mm.

Male type and female allotype taken by author *in coitu* on *Quercus bicolor* at Bronxville, Westchester County, New York, June 8, 1913. Type and allotype in author's collection; paratypes in collections of E. P. Van Duzee, W. T. Davis, University of California, Cornell University and American Museum of Natural History.

A large series of topotypic examples, including several copulating pairs taken in the years 1911 to 1914 inclusive, shows in the male considerable variation in the width and extent of the pronotal dark vittæ, which are sometimes maculated with creamy white, and occasionally a dark spot is found on the pronotal carina in the middle of the pale area bounded by the anterior oblique and the medial transverse vittæ. The greenish color of the base of the metopidium also varies in extent, often wholly suffusing it, while the black of the abdomen, and, in general, the amount of pigmentation throughout, is dependent upon the degree of maturity of the insect. In the female the amount of the whitish pronotal maculation is very variable, as is the continuity of the black line along the dorsal carina. The abdomen, too, is often wholly whitish green. The accompanying plate illustrates the maculation and form of the specimens described, except that they are somewhat more slender than is indicated in figures 3 and 4.

Falling close to *Cyrtolobus (Atymna) querci*, Fitch, it is readily distinguished from that species in the male by the creamy white pronotal area, pale metopidium and clear hyaline elytra with sharply defined apical fuscous cloud. The female is very similar in aspect to the female of *querci*, but in general the green of the crest is more mottled with whitish, and the black line on the dorsal carina more interrupted. In form the crest in both sexes is more decidedly arcuate, is continued higher posteriorly, and is more coarsely and less densely punctured; the anterior marginal ridge of the cheeks is more sinuate; and the clypeus more broadly and gradually produced.

This species appears in the mature form about the first of June and reaches its greatest abundance at the middle of the month, continuing, however, through July. Although *Quercus alba* (on which *Cyrtolobus querci* abounds) and oaks of the *Q. rubra* series occur in the immediate neighborhood, I have never found this species on any of them, *Q. bicolor* apparently being its exclusive food plant.

Mr. E. P. Van Duzee, to whom I have submitted examples, has kindly examined the species and compared it with the material in his own very complete collection, and writes me that it is new to him, confirming my conclusion that it is as yet undescribed.

The species is named in honor of my wife in recognition of her self-sacrificing encouragement of my entomological studies.

